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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

ORIGINAL
FILE

In the Matter of

The Amendment of the Commission's
Rules to Establish New Personal
Communications Services
Section I - Wide Band PCS

) GEN Docket No. 90-314
) ET Docket No. 92-100
)
) RM-7140, RM-7175, RM-7617
) RM-7618, RM-7760, RM-7782
) RM-7860, RM-7977, RM-7978
) RM-7979, RM-7980
)
) PP-35 through PP-40, PP-79
) through PP-85

To: The Commission

BROAD BAND PCS
(1850 - 1991 MHz SERVICES)

COMMENTS OF
METROCALL OF DELAWARE, INC.
A PRIVATELY HELD RADIO COMMON CARRIER

November 9, 1992

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To: The Commission

**COMMENTS OF METROCALL OF DELAWARE, INC.
A PRIVATELY HELD RADIO COMMON CARRIER**

Metrocall of Delaware, Inc. (Metrocall) is a privately owned Radio Common Carrier holding licenses under Part 22 and under Part 90 of the Commission's Rules in forty (40) States. Metrocall was first licensed as a Common Carrier in 1966, and currently provides radio paging services throughout the nation. Metrocall was a partner in the initial Cellular license to the Washington/Baltimore Cellular system, one of the largest MSA's in the U.S.A. The principle owner of Metrocall, Mr. Harry L. Brock, Jr., was one of the founding partners of Cellular One of Washington. Additionally, Mr. Brock has been a key participant in cellular operations serving Norfolk, Virginia and Bakersfield, California. Metrocall and its predecessor organization, Advanced Radio Communications Company has participated extensively in land mobile two-way communications sales and service, and has been active as a licensee in Specialized Mobile Radio (SMR). Further, the officers of Metrocall have extensive operating experience under Parts 81 and 83 of the Commission Rules and have been active participants in several developmental

communications technologies as well as AM, FM and television broadcasting, MMDS, Military and Amateur Radio Communications. With over twenty eight years of experience as a licensed common carrier, and now providing service to in excess of 200,000 paging subscribers, Metrocall and its officers have standing before the Commission, and are well qualified to comment in the matter now before the Commission.

Metrocall has a thorough understanding of the Docket before the Commission in this important matter. Also, Metrocall jointly participated as an author of the Telocator comments filed on the Commission's Notice of Proposed Rule Making in this proceeding. Of great importance to our industry at large, and to the Commission, are the perspectives and observations contained in this Metrocall comment, which embodies the sometimes unique considerations of the small privately held Radio Common Carrier. These comments, while stating the concerns and recommendations of the small privately held carrier, are directed towards a fair, open "level playing field" concept for all sizes, types and classes of carriers.

It is our belief that such a policy will develop fair, simple to follow regulations and evolve a fair, competitive, robust marketplace for these services. Small privately held common carriers now operate on a national, regional and local basis, but without the benefits of being associated with large Regional Bell Operating Companies, LEC's, or publically held and traded corporations. These entities enjoy options of delayed profitability, subsidized operations, and frequently utilize public low cost debt or public equity to build facilities.

Companies such as Metrocall, who formed the original corner stones of Radio Common Carriers throughout the United States today, should be considered since it is often from these smaller organizations that creative thought leadership, and meaningful resolution of Commission issues has been found.

To facilitate our response, we shall respond to all the key points of the Proposed rules, but under two separate Sections. Section I, which addresses the wideband PCS segment 1850 - 1990 MHz. Section II, which is filed with the Commission under separate cover, addresses the narrow band PCS, Advanced Messaging Service.

With Metrocall's established standing as an affected participant by the NPRM on all Personal Communication Services, we urge the Federal Communications Commission to incorporate into its Final Order several suggestions discussed below to assist the Commission in fully realizing its goals of providing spectrum and regulatory structure which enables system universality, a high speed of deployment, a diversity of services, and competitive delivery.

EXECUTIVE SUMMARY

Metrocall of Delaware strongly endorses the Commission's Notice as a step critical towards realizing the proven public benefits of emerging PCS. The Notice properly concludes, there is a real and urgent need to advance this critical national agenda. Clearly, PCS will be an international market and unless a domestic spectrum allocation can be made quickly for PCS, the U.S. is in jeopardy of losing a major opportunity in its leadership role in the world telecommunications marketplace.

Metrocall agrees with the Commission's definition of PCS as a family of services, and the Commission's exclusion of broadcast services and fixed services (other than those ancillary to mobile PCS) from the category. The Commission's proposed flexibility in the use of spectrum licensed for PCS is an appropriate market driven policy and will further the Commission's goals of speed of development, diversity of service, and competitive delivery of PCS. Metrocall cautions that a Standardized Common Air Interface is absolutely essential to Broadband PCS achieving its market potential or technical goals.

The Commission proposes spectrum allocations, rules and policies for licensed and un-licensed PCS services in the 1850 - 1990 MHz band. The proposal also identifies universality, speed of deployment, diversity, and competition as primary goals and proposes a regulatory scheme based on competition and service flexibility to achieve the balance of these important national values. The Notice thus provides a comprehensive and well-reasoned backdrop for quickly moving new PCS from the laboratory of experimentation to the American marketplace.

In order to assist the Commission, Metrocall has developed a number of basic PCS policy recommendations that mirror the Telocator membership. Specifically, Metrocall urges the Commission to adopt PCS rules consistent with the following principles.

- The entire 1850 - 1990 Mhz band should be dedicated for terrestrial PCS, and any spectrum not immediately allocated should be held in reserve for future growth in PCS.
- The 1910 - 1930 MHz band should be allocated for un-licensed PCS devices.
- No separate allocation for wireless local loop services is warranted or in the national public interest.
- While all qualified applicants should be allowed to participate in new PCS allocations, specific measures should be taken to ensure market competition is not defeated by permitting near monopolistic operation of PCS and cellular facilities by a common operator.
- National PCS service areas and service areas based LATAs do not serve the public interest.
- Stringent anti-speculation measures are needed to deter licensing abuses and to encourage participation of qualified applicants.
- A level regulatory playing field must be insured for all providers of existing and emerging PCS services.

- Flexible technical regulations are warranted to allow the industry to pursue standards as the need arises.

Metrocall's comments and observations mirror or parallel the collective efforts of the PCS industry at large, to achieve a broad consensus on important regulatory issues and to hasten the arrival of a new technological era in mobile communications.

I. THE ENTIRE 1850 - 1990 MHz BAND SHOULD BE DEDICATED FOR PERSONAL COMMUNICATIONS SERVICES

The Commission's Notice and proposal reflect several spectrum allocations in the 1850 - 1950 MHz band for broadband PCS. The Commission has requested comment on individual licensed PCS allocations in the paired spectrum from 1850 - 1910 and 1930 - 1990 MHz. The Notice also recommends an allocation of 20 MHz from 1910 - 1930 MHz for un-licensed PCS devices and requests comments on a 10 MHz allocation for local exchange telephone company provision of wireless service.

Metrocall supports the specific recommendations in the Notice to allocate the 1910 - 1930 MHz band for un-licensed PCS. Currently the 1850 - 1990 MHz band is channelized into two-way bands from 1850 - 1910 MHz and 1930 - 1990 MHz, separated by a 10 MHz one-way allocation to achieve 80 MHz spacing between the existing transmit and receive channels. Since this central band is lightly loaded, and because the band can be made available for un-licensed operations with minimal impact on the private fixed microwave community, Metrocall joins Telocator in supporting this proposed allocation. With this allocation, un-licensed PCS devices can be offered immediately to address a substantial and important demand now being measured in the market.

The Commission has also solicited comment on whether 10 MHz should be allocated for wireless local access. Metrocall does not believe a separate 10 MHz allocation in the 1850 - 1990 MHz band is necessary for wireless local loop service.

Wireless local access services are already contained within the broad definition of PCS, such that competing service providers should be able to offer fixed wireless local loop services on an ancillary basis within their general PCS allocations, thus preserving spectrum. More importantly, Metrocall advocates an open entry scheme encouraging all qualified applicants, including local exchange companies to apply for new PCS licenses (providing that cellular and PCS services are not held by common licensees). Thus, to the extent that demand exists for wireless local access to telephone company, such services can and should be offered by PCS licensees and the available spectrum should not be fragmented into service specific segments that ultimately reduce the carriers flexibility.

II. LICENSING RULES AND POLICIES FOR 2 GHz PCS SERVICES MUST ENCOURAGE THE PARTICIPATION OF QUALIFIED APPLICANTS

Licensing rules and policies developed for PCS service must encourage the participation of qualified applicants. First, the Commission should develop licensing policies that neither prefer nor discourage any qualified applicant. Second, licensed areas should be based on rational boundaries and should not severely limit entry opportunities. Third, the ten year license terms and renewal expectancies should be employed to promote license stability, which is essential to ensuring qualified entry. Finally, anti-speculation rules must be adopted to limit insincere applicants.

A. The Commission should adopt a policy of not preferring or excluding any qualified applicant for 2 GHz broadband PCS, but must preclude monopolistic market behavior.

Metrocall believes all qualified applicants should be permitted to pursue new PCS spectrum opportunities. However, the Commission must recognize and preclude monopolistic behavior, which will occur if limited PCS licensees are held in common with cellular activities.

Since PCS will likely offer a cost effective alternative to cellular and microcellular operations, it is critical that not be held by the same owners. Because so much existing cellular infrastructure is in place and fully depreciated, there is strong economic incentive for Cellular Carriers also holding PCS licenses in the same market, to "push" the existing cellular services, rather than the newly evolving PCS. This will slow the development of PCS.

Just as broadcasters are precluded from owning all the news media outlets of a given market, and just as an airline is precluded from owning all the transportation alternatives of a given market, existing cellular operators must be precluded from owning all the cellular/PCS alternatives of a given market.

B. National PCS service areas and LATA based service areas are not in the public interest

Metrocall does not believe that either nationwide licensing or licensing areas based on LATAs are consistent with the Commission's general approach to promote diversity and reliance upon marketplace realities. Metrocall joins other carriers in specific reasons for opposition to nationwide licensing and LATA based licensing as discussed below.

The Commission has solicited comment on the national PCS licensing, because granting licenses for a relatively large region may "facilitate regional and nationwide roaming; allow licensees to tailor their systems to the natural geographic dimensions of the PCS market; reduce the cost of interference coordination between PCS licenses; and to simplify the coordination of technical standards. Most importantly, the Notice states that national licensees maximize economies of scale and scope as well as the other benefits of large service areas.

Finally, the Commission suggests that national licensees may be better able to compete in foreign markets.

Metrocall believes that these reported benefits are either illusionary or outweighed by the off-setting severe curtailment of entry opportunities inherent in national licensing. While assignment of a single nationwide license would accomplish the establishment of a defacto technical standards for PCS, it would do it at the expense of technical experimentation and diversification. Such a strategy creates the significant potential that the industry will commit itself early to a technology which is not the optimum technology for PCS and which reduces the opportunity for marketplace experience to identify and drive PCS technology to that technology which best meets the marketplaces needs.

Metrocall also believes that the public user will achieve lower prices, service diversity, and other benefits of competition - as well as the ability of domestic industries to compete internationally - would be enhanced by quickly increasing entry opportunities rather than by restricting them. The Commission stated in the Notice that "smaller service areas may permit a broader participation by firms of all sizes in the PCS market" this quote may produce a greater diversity in degree of technical and service innovation than would be expected by a few large firms. Metrocall does not believe that national service would serve the public interest win wide band PCS.

Metrocall also opposes a licensing scheme based on LATAs. The Commission has suggested LATAs are potential licensing areas because "this option may facilitate efficient integration of PCS into the local telephone infrastructure". As AT&T, the principle architect of the LATAs noted LATAs do

not bear any relationship to markets for mobile services: "The technology, economics, customer requirements, and competitive implications of mobile radio services are so different from those of landline services that it would be irrational and contrary to any reasonable interpretation of the decree or anti-trust policies to confine the BOCs mobile radio systems to the precise LATAs established for landline service". The Regional Bell Operating Companies have noted that landline LATAs do not reflect the different characteristics of services designed to reach the mobile communications marketplace. Consequently, basing mobile service licensing on LATAs would not be rationally related to marketplace realities.

C. Ten year license terms for PCS are warranted

Metrocall supports the Commission's proposed ten year licensing terms for PCS services in conjunction with a renewal expectancy in order to allow new PCS providers to establish economically viable systems. This level of licensed stability is essential to enable new entrants to justify significant investment in PCS infrastructure. More importantly, financial institutions will not be encouraged to participate in risks associated with deployment of PCS in the marketplace if licensing schemes are less than ten years, and a ten year license would be consistent with other mobile services, including cellular.

D. The Commission should adopt stringent lottery reforms to deter speculation for 2 GHz PCS licenses

The Commission is correct in focusing on lotteries, strengthened and improved by the addition of anti-speculation safeguards as the licensing method for PCS. Focusing on qualified lotteries is the best means to ensure that there is no delay in the licensing process and will speed deployment of service to the

public. Licensing problems in the cellular authorizations and other radio services have demonstrated the need to adopt regulations to limit the influx of speculative mass market produced applications by entities motivated by prospects of immediate financial gain, rather than service to the public. The experience with cellular and 220 - 222 MHz licensing has demonstrated that measures originally reviewed as strict, may not significantly affect the numbers of speculative applications filed. Metrocall recommends adopting a full spectrum of measures designed to combat speculation.

The Notice suggests several ways to limit the number of insincere applications filed for PCS authorizations. Metrocall's specific recommendations on these proposals are as follows:

- Financial qualification criteria.

Due to the relatively high cost of developing a micro-cellular PCS infrastructure, requiring firm financial commitments at the initial application state is critical to ensuring that applicants are in a position to achieve actual deployment of PCS. Metrocall suggests that a Bond or unrevocable Letter of Credit be posted at the time applications are filed with the Commission. The Bond would be released if the application was not successful, and would be retained if the applicant was successful.

- Construction commitments and deadlines.

In order to ensure rapid deployment of PCS services and to limit the possibility of spectrum hoarding, the Commission must mandate aggressive construction commitments and deadlines for the offering of PCS service. Metrocall recommends that a two year period for construction of

the system be allowed, to be followed by a minimum of three years of operation before the license can be transferred. Failure to meet the three year commitment of operating the facility before transferring the license would null and void the license and return it to the Commission for reassignment to a new participant.

- Filing Fees.

In order to reduce potential speculative gain, Metrocall believes the Commission should not adopt non-refundable filing fees.

Due to the vast and considerable media attention that has been focused on PCS, speculation problems can be expected to be worse than those experienced in cellular and 220 - 222 MHz private radio licensing. Adoption of a full compliment of anti-speculation measures is critical to halting the influx of insincere applications. Pre-lottery settlements with disclosures prior to the lottery process should be permitted. When the cellular rules were amended to bar pre-lottery settlements among non-wireline applicants, there did not appear to be any diminution of the number of applications filed. Barring pre-lottery agreements precluded the possibility of competing applicants arriving at legitimate settlements, which would speed the licensing process and the delivery of service to the public. As a result, Metrocall believes that pre-lottery settlements for PCS licenses should be allowed, subject to disclosure rules to prevent abuse.

III THE COMMISSION SHOULD ADOPT A REGULATORY FRAMEWORK FOR PCS SERVICES THAT RELIES ON COMPETITION RATHER THAN COMPREHENSIVE REGULATION

The Commission proposes to rely on competitive markets and regulatory flexibility to bring the family of PCS services to the marketplace. Clearly, the Commission has placed its faith in competitive markets and service flexibility as the best path to provide the greatest possible choice and lowest cost for consumers. Metrocall agrees with this approach and believes that uniform regulations to provide a competitive environment and a flexible regulatory restructure are important to realizing the benefits of PCS. However, the Commission must also recognize that through public securities market offerings, organizations are able to continue to operate in competitive markets, at less than competitive market pricing (below actual operating cost) for a sustained period of time. The ultimate tragedy in such a scenario, is that organizations which continually operate at less than actual operating cost through funds made available through public equity offerings, ultimately fail the test of business. In this particular scenario, it is Mr. & Mrs. America who, through their participation in the public equity markets, have funded organizations in competitive markets which were not being operated for long-term profitability and sustainment of operations, but were being operated for short-term growth and gain in the public equity markets.

The Commission should be mindful that every PCS license issued with the underlying understanding that market competition rather than comprehensive regulation will ultimately sustain them; the businesses must operate not just on a cash flow positive basis, but on a net income basis in order to protect both the investments made by the American public, but also the success of the PCS technology in the marketplace.

A. The Commission must ensure that a level playing field exists for all PCS providers

Both the American Mobile Communications Industry and the public will be best served by adopting a uniform set of regulations that apply equally to the full family of PCS services, including both new offerings and existing services such as cellular. In particular, this uniform set of regulations should include the following attributes:

- Adoption of the Telocator flexible service concept.

The flexible service concept provides that PCS operators should be permitted to offer both common carrier and non-common carrier services over their assigned frequencies.

- Equal rights to interconnection with the Public Switch Network.

Metrocall agrees with the Notice proposal that PCS carriers, regardless of regulatory status, should have a federally protected right to interconnection with the PSTN. Metrocall further believes that new PCS carriers should have interconnection that is reasonable for the particular PCS system and "no less favorable than that offered by the LEC to any other customer or carrier".

- Flexible regulation services provided.

Metrocall believes the Commission should limit itself to licensing, enforcement, equipment certification, and the adoption of standards developed by the industry.

These policies would ensure full and fair competition for new and existing PCS service providers. If the Commission succeeds in establishing a level playing field for competitive providers of PCS, which

must include a provision for true "Net Income", providers will have a strong incentive to offer attractive services and prices, because any customer will have numerous service options from which to choose.

- Further comments on regulatory status (NPR Section 94-98)

In order to provide the widest flexibility to the PCS service providers, and minimize unneeded delay to sort out the mostly artificial legal and regulatory significance of designation of a carrier as common or private, we suggest the applicant select carrier status as permitted by the FCC in the MMDS services. Common carrier status may be significant if the PCS carrier is the only service (monopoly) in a marketplace, or is a unique type of service. Common carrier regulatory status becomes unimportant if the market is highly competitive, with many similar services, competing on an even playing field. In this case, the market will be adequately "regulated" by the marketplace. It will be an efficient and innovative marketplace. In a truly competitive marketplace common carrier status, with state oversight, tariff filings result in added cost, administrative burdens, delay, and add NO benefit to the service provider or the public. In a competitive market the public (service users) make absolutely no distinction between common or non-common carriers (eg. paging and MMDS). Experience shows the principle concerns are price and availability. Secondly, they are interested in the benefits and features of the equipment and service. True market driven commerce requires quick response to changes in price, services, and equipment offerings. Imagine having a government entity trying to process daily

tariff changes, or regulate entry and offerings of an airline (since deregulation) or of a UPS or Federal Express type of business. In a truly competitive market with multiple and unrelated systems operators application of common carrier status can only delay and impair the free market functioning. Common carrier status has not even assured economic viability of carriers from each other nor from private carriers. It is clear to Metrocall that the national communications policy in competitive (non monopolistic) services should be to work toward the elimination of the regulatory distinction of common carrier and private carrier. The carrier status confers no practical advantage, but does create confusion in regulation, giving different advantages and disadvantages to each in such a way that neither is better or worse, just different rules, licensing processes, administrative staffs, and in the end provide the same services to the public (e.g paging, MMDS), with no measurable difference in the marketplace to the user. Metrocall strongly supports the removal of all distinctions of rules and regulations of providers in competitive services, and suggests that the FCC work toward common rules for licensing, even to encouraging amendment to the Communications Act when and if needed to arrive at a common, simplified, level playing field for all providers. Along this path, the commission should keep the best features of private and common carrier licensing schemes, and eliminate the worst. This would "up average" both private and common carrier treatments under the rules, while reducing regulations and a false idea that in practice in these

mass market competitive services make any real or significant end user differences.

B. Technical standards for PCS should be left to Industry Standards Group

Metrocall supports the Commission's tentative conclusion that the public is best served if PCS is subject to minimal technical regulation at this time. Additionally, because PCS concepts are still being developed and many PCS technologies are at their inception. A technical framework that will permit significant flexibility in the design and implementation of PCS systems, devices and services is clearly warranted and in the public interest.

The Commission's experience in the cellular program has adequately demonstrated the strength of such an approach. More over, the PCS industry has demonstrated its ability and commitment to the timely development of technical standards necessary to the successful deployment of new PCS. At this time, Telocator and the two major U.S. standards organizations are currently working on PCS related standards -- Committee P1's Telecommunications Sub-Committee on Personal Communications Standards and the Telecommunications Industry Association's Sub-Committee TR45.4 on Microcell and PCS Standards are engaged in regular coordinating meetings to advance standards work intelligently and expeditiously. Accordingly, Metrocall believes that the Commission should limit itself to licensing, enforcement, equipment certification, and the adoption of standards developed by the industry for 2 GHz licensed PCS services. Key to this, will be the Commission's requirement of an appropriate Common Air Interface from a suitable standard development body. Metrocall concurs with the Commission that an FCC mandated technical advisory committee is unnecessary

in light of the ability of industry groups to pursue PCS standards and evidence that this work is moving forward in the standards bodies. Inter-operability and inter-system roaming should not be required at this time, and the industry should be permitted to pursue such standards as PCS technology matures and the need for such services arises.

Metrocall does consider it necessary to comment on power levels in response to the NPR Section 114-116, while leaving the bulk of the technical standards and engineering to an industry Standards Group.

Although the vast majority of mobile telephone services, telepoint, and data will most likely operate at very low power levels to allow frequency reuse in very small cell (microcell) service to large number of users simultaneously in densely populated areas, Metrocall strongly urges the Commission to authorize reasonably higher power levels as suggested in the NPR. Power levels of 7-10 watts ERP for the mobile units, and 500 watts ERP base station, and up to 25 watts ERP for Digirepeaters. These power levels would be necessary in rural and low population areas where microcells and very low power levels would not cover sufficient distance to meet communication needs or be economically viable (e.g. ranch, farming and mining areas, ski resorts, outdoor recreation areas, "strip or ribbon" system requirements such as rural highways).

Metrocall agrees with the general direction the Commission is taking in recognizing EIA/PIA Bulletin PSB10-E as the appropriate document for addressing interference protection for private operational fixed microwave systems.

However, we do not agree with the Commission's recommendation that the current level of protection provided by Bulletin PSB10-E should be standard. The

Bulletin, in its current form, does not provide requirements, specifications, or guidelines for either fade margins or link reliability and availability objectives.

Finally, Metrocall believes that power and height requirements should be based upon a blanket limitation, which meets RF health hazard requirements, but allows for maximum flexibility of service requirements in the 1850 - 1990 MHz band. In this important area, the Commission has noted, industry standard bodies are currently examining RF radiation considerations through IEEE C.95, and should be permitted to take a lead in developing new RF exposure guidelines.

C. Common Air Interface is imperative to broadband PCS

Metrocall urges the Commission to direct the development of a common air interface. This may be the single most important factor determining the success of broadband PCS.

The cellular "success story" of the U.S. was made possible due to just such a common interface. It is imperative to the roaming features of the cellular service, as well as to the manufacturing efficiencies of cellular subscriber equipment. Without a common interface, unique equipment would have developed, in low volume high cost production runs, and the ubiquitous nature of cellular coverage would have been defeated.

The common air interface is imperative to a successful broadband PCS system in America.

D. Digipeater Authorized

Digipeater rules should be minimal and should provide a lot of flexibility. Digipeaters should be permitted anywhere within the service contour of the associated base station(s) and should not exceed the base station signal strength

at the boundary of the service contour. Digipeater stations are low cost, low power (quite possibly solar powered at some sites), relatively small modular units, easily installed, or moved, and inexpensive to operate. Simply stated, the purpose of the digipeater is to receive very weak signals originating from very low power, small size personally portable data terminals in poor transmitting locations such as inside buildings, to store and immediately repeat the transmission adding more power and retransmitting from an outdoor (more suitable antenna location) so that the data is "relayed" back to the central station to complete the data link. Digipeaters may be adjusted to permit retries of a lost or corrupted transmission by repeating it a limited number of retries until acknowledged by the receiving station as correctly received.

E. Digipeater Technical Standards

The antenna requirements should be similar to the Control Station rules in Part 90. We envision that most of the digipeater stations will be located in intermediate locations within a service area, having antennas located within 20 feet of existing structures, and normally not located on antenna towers, but rather on rooftops, existing poles (telephone, electric, CATV, parking lot, or gas station). Digipeaters should be constructed so that they may be "ordered to shut down" from the control center of the service area, and be further protected by internal control timing circuits which will deactivate the digipeaters transmitter in event that the transmitter fails to cease transmitting in a period slightly longer than that of the longest packet message interval used in its transmission protocol. Such control system may, at the time of such shut down, send a packet message to the control center advising of its automatic deactivation so that an alarm event may

be recorded and appropriate maintenance personnel dispatched to repair or replace the malfunctioning digipeater unit. Digipeater should be permitted power level up to 25 watts ERP. Other technical standards for digipeaters should be the same as mobiles in this service.

F. Technical regulations for un-licensed PCS devices should be left to industry standards group

Metrocall supports the Commission's determination that flexibility should be granted to manufacturers of devices for operation in the un-licensed PCS band. We believe that un-licensed services promises to be a significant segment of the PCS market, and that a spectral etiquette can be developed that will control interference between and among non-licensed devices. At this time, industry groups are engaged in the development of this etiquette. As in other areas of technical standards, we believe that this process should be left to the industry for resolution.

Metrocall concurs with the Commission's tentative conclusion regarding the use of digital modulation. We recommend however revising the Notice's proposal for un-licensed services in two respects: First, the channelization scheme proposed does not provide sufficient flexibility to meet the requirements of non-licensed PCS. Dictation of the channelization scheme in the rules will, by default, influence the technical standards adopted. The industry is best suited to address technical standards issues and is currently working to develop a sharing etiquette which will likely drive those standards. Channelization of the 1910 - 1930 MHz band should be left flexible in order to avoid foreclosing the options available to the standards bodies in defining technical standards which meet un-licensed service market requirements.


Metrocall concurs with Telocator's study which concludes that while it is possible for spectral etiquette to prevent PCS to PCS interference, it is not possible for un-licensed devices to share spectrum with existing 2 GHz licensees with any guarantee against interference. Accordingly, clear spectrum is required for the deployment of un-licensed services.

V. CONCLUSION


The Commission's Notice is a needed and vitally important breakthrough for the PCS industry and the public at large. The Commission has defined appropriate goals for PCS policy and details a realistic regulatory framework, which is optimally suited to maximizing these goals. If the Commission will incorporate the recommendations made in these comments and in the Section II comments which address narrowband PCS, then the nation will be well positioned to meet the personal communications needs of America for the foreseeable future.

Respectfully submitted.

METROCALL OF DELAWARE, INC.



Harry L. Brock
President & Chief Executive Officer



Christopher A. Kidd
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